

HAHN AND ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

October 14, 2016

Mr. Dana Bayuk
Oregon Department of Environmental Quality
Northwest Region, Portland Office
Portland Harbor Section
700 NE Multnomah Street, #600
Portland, Oregon 97232

HAI Project No. 2708
DEQ ECSI File No. 84

**SUBJECT: Progress Report, NW Natural Site, 7900 NW St. Helens Avenue and
7200 NW Front Avenue, Portland, Oregon**

Mr. Bayuk:

Hahn and Associates, Inc. (HAI) has prepared this monthly Progress Report to summarize Remedial Investigation/Feasibility Study (RI/FS) and source control-related work activities conducted by NW Natural relating to historic manufactured gas plant (MGP) activities at the NW Natural Site during the month of September 2016. NW Natural is completing upland investigation and cleanup activities at the NW Natural Site under the Voluntary Agreement No. ECV-C-WMCVC-NWR-94-13 (Voluntary Agreement) between NW Natural and the Oregon Department of Environmental Quality (DEQ).

**1. ACTIONS TAKEN UNDER THE VOLUNTARY AGREEMENT DURING
THE PREVIOUS MONTH**

HAI field activities related to monitoring and maintenance of the dense non-aqueous phase liquid (DNAPL) extraction system at surficial fill well locations MW-6-32 and MW-13-30 occurred during September 2016. The system recovered approximately 37 gallons of fluids in September, primarily DNAPL.

Tasks related to maintenance of the HC&C system and the groundwater treatment system were conducted in September 2016, with the system operating under Phase 2 testing parameters since July 21, 2015. No significant non-routine actions were completed in September.

Baseline DNAPL removal as needed to maintain levels below the top of the well sumps was conducted by Anchor QEA during September 2016 in the following wells near the river shoreline.

- MW-26U
- MW-27U
- MW-38U
- MW-PW-2L
- PW-2L

A total of 10,534,436 gallons of water were treated in the on-site groundwater treatment plant and discharged during September 2016. Discharged water met all effluent criteria set by the facility's NPDES permit.

NW Natural's third quarter 2016 groundwater monitoring event was initiated at the Gasco and Siltronic properties in September 2016.

2. ACTIONS SCHEDULED TO BE TAKEN IN THE NEXT MONTH

NW Natural and DEQ technical working group communications and meetings are anticipated to occur as needed within the next month to discuss ongoing project tasks.

Planning and preparations for completion of the RI/RA Addendum for the northern portion of the Siltronic property will be underway during the indicated timeframe. NW Natural has proposed a submittal date of March 29, 2017 for the RI/RA Addendum. NW Natural will work with the Oregon Department of Justice to finalize related revisions to the Voluntary Agreement needed to address DEQ's November 2015 project restructuring determination during this timeframe.

HC&C groundwater model validation, sensitivity analysis, particle tracking simulations, and submittal of the groundwater model report (submitted October 14) are anticipated to occur during this timeframe.

NW Natural will prepare a work plan during the indicated timeframe for DEQ approval to document wet season run-off observations and other activities as needed to evaluate potential stormwater-related interim source control measures at Gasco.

Groundwater sampling activities as per the current DEQ-approved third quarter monitoring event (initiated in September 2016) will be completed during October.

3. LABORATORY TEST RESULTS RECEIVED DURING THE PREVIOUS MONTH

NW Natural receives test results on a regular basis as a result of routine monitoring related to groundwater quality or as specified by various permit requirements. Additionally, test results are periodically received through implementation of task-specific investigation activities resulting from agency-approved work plans. These data are provided to DEQ or the permitting authority (if different than DEQ) in accordance with previously-approved formats and schedules.

There were no test results received within the previous month that will not be reported in accordance with previously-approved formats and schedules.

4. PROBLEMS EXPERIENCED DURING THE PREVIOUS MONTH

There were no problems of significance experienced during the previous month.

Should you have any questions, please contact the undersigned.

Sincerely,

A handwritten signature in blue ink, appearing to read "Rob Ede", with a stylized flourish at the end.

Rob Ede, R.G.
Principal

robe@hahnenv.com

Attachment: September 2016 Communications and Submittals

Cc: Mr. Bob Wyatt, NW Natural (electronic only)
Ms. Patty Dost, Pearl Legal Group PC (electronic only)
Ms. Rachel Melissa, Pearl Legal Group PC (electronic only)
Ms. Sarah Riddle, Pearl Legal Group PC (electronic only)
Mr. Carl Stivers, Anchor QEA, L.L.C. (electronic only)
Mr. John Edwards, Anchor QEA, L.L.C. (electronic only)
Mr. Ben Hung, Anchor QEA, L.L.C. (electronic only)
Mr. Ryan Barth, Anchor QEA, L.L.C. (electronic only)
Ms. Halah Voges, Anchor QEA, L.L.C. (electronic only)
Ms. Jen Mott, Anchor QEA, L.L.C. (electronic only)
Mr. John Renda, Anchor QEA, L.L.C. (electronic only)
Mr. Tim Stone, Anchor QEA, L.L.C. (electronic only)
Mr. Chip Byrd, Severson Environmental Services, Inc. (electronic only)
Mr. Henning Larsen, DEQ NW Region (electronic only)
Mr. Keith Johnson, DEQ NW Region (electronic only)
Mr. Dan Hafley, DEQ NW Region (electronic only)
Ms. Jennifer Peterson, DEQ NW Region (electronic only)
Mr. Mike Poulsen, DEQ NW Region (electronic only)
Ms. Cindy Bartlett, Geosyntec Consultants, Inc. (electronic only)
Mr. Bruce Marvin, Geosyntec Consultants, Inc. (electronic only)
Mr. Vipul Srivastava, Geosyntec Consultants, Inc. (electronic only)
Mr. Myron Burr, Siltronic Corporation (electronic only)
Mr. James Peale, Maul Foster & Alongi, Inc. (electronic only)
Ms. Madi Novak, Maul Foster & Alongi, Inc. (electronic only)
Mr. Mike Murray, Maul Foster & Alongi, Inc. (electronic only)
Ms. Mary Benzinger, Maul Foster & Alongi, Inc. (electronic only)
Ms. Kelly Titkemeier, Maul Foster & Alongi, Inc. (electronic only)
Ms. Kristine Koch, Region 10 EPA (electronic only)
Mr. Sean Sheldrake, Region 10 EPA (electronic only)
Mr. Rene Fuentes, Region 10 EPA (electronic only)
Ms. Eva DeMaria, Region 10 EPA (electronic only)
Mr. Lance Peterson, CDM, Inc. (electronic only)

ATTACHMENT

COMMUNICATIONS AND SUBMITTALS – SEPTEMBER 2016

In correspondence dated September 9, 2016 (Jen Mott to Dana Bayuk), NW Natural presented proposed steps and a schedule for transitioning from the commissioning phase to the long term O&M phase of the groundwater hydraulic control and containment (HC&C) system.

In correspondence dated September 12, 2016 (Jen Mott to Dana Bayuk), NW Natural transmitted the Anchor QEA memorandum entitled *Proposed Revisions to the NW Natural Gasco Groundwater Monitoring Program*.

Various e-mails were transmitted between NW Natural and DEQ between September 7, 2016 and September 13, 2016 regarding the scheduling, content, and attendees for a teleconference related to RI/RA activities to be completed on the Siltronic property.

A teleconference between representatives of DEQ and NW Natural was conducted on September 12, 2016 for discussion related to NW Natural's proposed revisions to the NW Natural Groundwater Monitoring Program, as provided in a memorandum of the same date.

A teleconference with representatives of DEQ, NW Natural, and Siltronic was conducted on September 13, 2016 to discuss the transitioning of the groundwater HC&C system from the commissioning phase to the long term O&M phase.

A teleconference with representatives of DEQ, NW Natural, and Siltronic was conducted on September 14, 2016 for DEQ to present expectations regarding work by NW Natural and Siltronic on the Siltronic property, including: 1) the hydro-geo conceptual site model (CSM) to be used; 2) the human and ecological risk assessment (HERA) framework to be used on the property; and 3) the need to use pre-remedial or pre HC&C operation groundwater conditions for baseline HERA evaluations.

In correspondence dated September 20, 2016 (Dana Bayuk to Rob Ede), DEQ provided comments regarding the format and content for NW Natural's August 2016 monthly progress report (MPR) as well as future MPRs to be prepared by NW Natural under the Voluntary Agreement.

DEQ provided verbal and voice mail feedback to NW Natural (Keith Johnson to Bob Wyatt) during the week of September 26, 2016 related to DEQ concerns with the Gasco Uplands Feasibility Study Work Plan.

In correspondence dated September 29, 2016 (Ben Hung to Dana Bayuk), Anchor QEA provided correspondence to document a phone conversation with DEQ related to 1) NW Natural's RI/RA Addendum; 2) future groundwater treatment plant residuals data packages; and 3) NW Natural's proposal to transition the HC&C system into the long term O&M phase. DEQ provided verbal feedback on October 7, 2016 related to the groundwater treatment plant residuals data packages (voice mails for Ben Hung from Dana Bayuk) to clarify that the groundwater treatment plant residuals data package submittals though the second quarter of 2016 had met DEQ's expectations for these submittals, a data package for the third quarter of 2016 was not needed, and that DEQ would contact NW Natural to discuss potential future groundwater treatment plant residual data package expectations.